APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/454,969	12/06/1999	RYOJI FUKUDA	35.C14082	4477

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EXAMINER
ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
2674	

DATE MAILED: 05/20/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/454,969	FUKUDA, RYOJI
	Examiner	Art Unit
	Abbas I Abdulselam	2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>*20 April 2004*</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,4,7-14,22,23,25,28-34,42,43,45,48-54 and 62-64* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,4,7-14,22,23,25,28-34,42,43,45,48-54 and 62-64* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1-2, 4, 7-14, 22-23, 25, 28-34, 42-43, 45,

48-54 and 62-64 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4, 7-14, 22-23, 25, 28-34, 42-43, 45, 48-54 and 62-64 are rejected under 35

U.S.C. 103(a) as being unpatentable over Babb et al. (USPN 5940065) in view Edo et al. (USPN

6133905), and kawashima (USPN 6320614).

Regarding claims 1, 22 and 42, Babb teaches touch screen system including correcting of

coordinates such as (X, Y), and correction coefficients. See column 2, lines 1-9. Bobb discloses

uncorrected coordinates input to be linearized by algorithm means before it is ready for lookup

table, which operates in linearized space. See column 2, lines 11-14. Babb further teaches that

the lookup table provides an addressable storage for correction coefficients, which are used to

calculate a location from measured detector values. See column 2, lines 1-2. Babb shows that the

coefficients are to be solved using simultaneous equations. See column 4, lines 23-25 and

column 11, lines 24-29. Babb teaches the range of corrections as being from zero order to

polynomial levels and also teaches a mapping function to map the detector outputs to corrected

coordinate positions. See column 2, lines 9-10 and column 4, lines 19-23. Furthermore, Babb

teaches a method for determining coordinate positions with respect to a second medium having a

surface from multiple input values. See column 8, lines 49-67. Babb teaches a programmable

read only memory (EEPROM) which may be attached or included with a sensor for string

coefficients. See column 10, line 66 and column 11, lines 1-5. Likewise, Babb teaches 2K-bit

memory device that is used to store the calculated and applied coefficients. See column 16, lines

50-53.

Babb teaches data acquisition system (200) along with substrate (110) and the process of

data transmission. Babb teaches a touch screen system including detectors in terms of accurately

determining a coordinate position of a touch. Babb also teaches sensor data coordinates with

respect to touch coordinates that are not-linear and the use of least mean square curve for

solutions of equations. In addition, Babb teaches a Mathcard software which is used to compute

the mapping coefficient and further teaches programming codes, which are used for efficient

executions. Babb teaches a method involving reception of an address in the form of X and Y

values corresponding to uncorrected coordinates and also teaches a method to produce corrected

coordinates. Babb teaches mapping of a sensor in terms of sample (160), touch detected (161),

calculation (162), identification (163) and computing X and Y coordinates (164). See column 1,

lines 6-14, column 2, lines 1-9, column 4, lines 34-47, column 13, lines 5-10, column 17, lines

48-60, Fig 6 and Fig 7. However, Bobb does not disclose "reference points yet to be designed are

displayed for designation in an arbitrary order". Edo on the other hand teaches an input apparatus

including a display unit (31) which causes predetermined number of options to be displayed with respect to predetermined reference points in the displayed region such that the display control unit (36) selects one of the options and when select key (39) is operated by a user, the option is changed according to the order of selection in response to the key operation. See the abstract and Fig. 1&2.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Babb's touch screen system to adapt Edo's display control unit (36) along with selection mechanism operated by the user. One would have been motivated in view of the suggestion in Edo that selection of options operated by the user as demonstrated in Fig (1-2) equivalently provide the desired reference points. The use of display control unit along with selection mechanism helps function an input apparatus more effectively as taught by Edo et al.

Moreover, referring Fig. 6, Edo teaches "arranging position data group" (85), which includes coordinates corresponding to the display state storage (35). Edo also teaches that display state storage (35) includes regions for storing selected processing candidate. See col. 12, lines 24-31. It would have been obvious that the display state storage (35) is functionally equivalent to the desired coordinate keeping means.

Babb does not teach, "display control means controlling reference points so as not to display the discriminated reference point discriminated by the discriminating means". Kawashima on the other hand teaches an image discriminating unit (55) discriminating between the image photographing units, the discriminated image photographing unit having the image

display unit on which an image having a point or an area designated by the position or area

designating unit (51, 52) is displayed. See col. 5, lines 31-37 and Fig. 1.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Babb's input system with respect to position determination to adapt

Kawashima's use of image discriminating unit (55). One would have been motivated in view of

the suggestion in Kawashima that the image discriminating unit as configured in Fig. 1 can be

used to achieve the desired feature of not displaying "the discriminated reference point". The use

of an image discriminating unit helps a method of inputting information as taught by kawashima.

In addition, Kawashima teaches a position designating unit (51) designating an arbitrary

point on an image displayed on the image display unit (68) (col. 5, lines 15-18). Kawashima also

teaches a control-determining unit (53) determining a designation of a point or area by the

position or area-designating unit (51, 52). It would have been obvious to utilize Kawashima's

position designating unit (51), and a control-determining unit (53) to achieve the desired

arbitrary order as well as reference point designation respectively.

Regarding claim 2, Babb teaches that fro each set of coordinate values (X, Y), the

detector values are used as variables A, B, C, D in the from of equations. See column 13, lines

20-32.

Regarding claims 4, 25 and 45, Babb teaches that the mapping equation which is capable

of producing accurate position output. See column 3, lines 1-2, and column 4, lines 1-12.

Regarding claims 8, 29 and 49, Babb teaches solving simultaneous equations, which

determines coefficients. See column 11, lines 24-29

Regarding claims 10, 31 and 51, Babb teaches mapping for a set of sensor data

coordinates to touch coordinates and also teaches that the mapping relation has inputs greater in

number than outputs. See column 4, lines 39-47. Babb teaches distortions of coordinate values in

X and Y and in rectangular shape. See Fig 1.

Regarding claim 43, Babb teaches a method of determining coefficients involving solving

polynomial equations. See column 7, lines 25-48. Babb also teaches correction coefficients as

well as storage for correction coefficients, and the steps of producing corrected coordinates. See

column 2, lines 1-18.

Regarding claims 11, 23, 32 and 52, Babb teaches a method of determining coefficients

involving solving of polynomial equations. See column 7, lines 25-48. Babb also teaches

correction coefficients as well as storage for correction coefficients, and the steps of producing

corrected coordinates. See column 2, lines 1-18.

Regarding claims 12, 33, 53 and 62-64, Edo teaches a display control unit (36) which

causes the "processing candidate option" to be displayed in different mode when not selected.

Edo teaches that the display control unit also arranges the reference points with respect to X and

Y coordinates. See col. 8, lines 55-64 and col. 10, lines 29-37. Coordinates.

Regarding claims 13, 34 and 54, Babb teaches algorithmically compensated pressure and

position sensor. See Fig 11.

Regarding claim 14, Babb teaches a mapping system which can be provided as software

driver system in a connected host computer. See column 11, lines 6-8

Regarding claims 9, 30 and 50, see Fig 8 (257, 210).

Regarding claims 7, 28 and 48, Edo teaches an option designation operation of the input

apparatus (23) where the display control unit (36) selects a " processing candidate option" and a

group of options from a plurality of options such that the option number the option selected as

well as coordinates of plurality of display positions are stored in the display state storage (35).

See col. 13, lines 22-38 and Fig. 7.

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. The following arts are cited for further references.

U.S. Pat. No. 6,195,068 to Suzuki et al.

U.S. Pat. No. 5,425,109 to Saga et al.

4.   Any inquiry concerning this communication or earlier communication from the examiner

should be directed to **Abbas Abdulselam** whose telephone number is **(703) 305-8591.** The

examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709.**

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to Crystal Park II, crystal drive, Arlington,

VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Technology center 2600 customer Service office whose telephone

number is (703) 306-0377.

Abbas Abdulselam

Examiner

Art Unit 2674

May 11, 2004

XIAO WU
PRIMARY EXAMINER